

of soft iron, wound round with wire. Your chemical lecturer has, doubtlessly, made you aware that the magnetic effect is proportionate to the power of the battery, so that if you were desirous of producing but slight effect, you would employ this tumbler battery; but if you required the action to be manifested at a greater distance, you would use a compound battery, such as this trough battery upon the table. The compound battery will magnetize a needle, in conjunction with the electro-magnet, in the space of two or three minutes. A powerful permanent magnet would answer as well as the temporary magnet; but it would be very expensive, and not so constantly at hand. When soft iron is impacted in any part of the body, we do not require either the electro or permanent magnet, for on this substance we are unable to confer magnetic properties.

"To test the existence of a magnet within the body, we may take a magnetized sewing needle, and suspend it by a piece of silkworm's silk, when it will exhibit certain phenomena upon the approach of the suspected part, provided it contain a piece of magnetized steel. Although this simple contrivance will amply suffice, I myself possess a needle which was made for me by Messrs. Willats, of Cheapsides, and which is well adapted for the purpose.

"It consists, as you perceive, of a delicate needle, about six inches long, centred upon a small agate cup resting upon a steel point; so that the smallest possible amount of resistance is offered to its free play.

"When a part containing magnetic steel is brought near the needle, it may be either attracted or repelled, it may move upwards or downwards, or it may exhibit disquietude according to the position in which the new magnet is held. We may detect the position of the foreign body, when it is of any size, by ascertaining where its north and south poles lie, and these are determined by their repelling and attracting the opposite poles of the magnetic needle. The disquietude, or motion upwards and downwards, merely indicates magnetism, but not the direction of the magnet.

"You will, doubtless, be surprised when I tell you, that in this manner I have detected a piece of needle impacted in the finger of a young woman, although it weighed but the seventh of a grain. This gave such marked indications, that I found out tolerably well the position of its north and south poles, though I could not ascertain the presence of a foreign body in any other way. I tried experiments on smaller pieces, at short distances, such as half an inch to an inch, and I found that a piece of needle, weighing 1-60th of a grain, gave decided indications after having been magnetized, and perhaps even a still smaller amount of steel might in some cases be detected.

"I have now satisfactorily demonstrated to you, that magnetism may be used for the detection of steel particles impacted within the body with absolute success; and though but a very trifling application of natural philosophy to the practice of surgery, I have no doubt that, had it been adopted before, many joints would have been saved; and I confidently anticipate that it will be the means, in future, of frequently saving these parts from destruction."

56. *Perineal and Lumbar Operations for Artificial Anus.*—At a late meeting of the Surgical Society of Ireland, Sir P. Crampton, the president, communicated some facts tending to settle the hitherto undecided point as to whether the power of retaining the feces continues after the perineal operation for artificial anus as recommended by M. Amussat. He detailed the results of an operation for artificial anus performed by M. Amussat, in a child, about nine years since. During the subsequent period he (Sir Philip) had had frequent opportunities of examining the condition of the child. The nature of the congenital deformity was as follows:—"The vagina and anus were both naturally formed externally, but the recto-vaginal septum was deficient above, and only existed inferiorly to the extent of about one-third of an inch, so that the finger could be passed from either canal into the other. The upper portion of the rectum had no communication with the cloaca common to the vagina and the anal portion of the rectum, but its closed extremity could be felt at a height of about two inches towards the left sacro-sciatic angle. The anus thus communicated directly with the vagina above the imperfect septum already mentioned, but had no connection with the rectum,

which terminated two inches above it, and was, in fact, properly speaking, deficient to that extent. Under these circumstances M. Amussat determined to make an incision anterior to the coecyx, but posterior to and not involving the vaginal anus, to detach the posterior wall of the vagina from the coecyx and sacrum with the finger or the knife, to reach the cul-de-sac of the rectum, seize it with a hook, detach its entire circumference rather with the finger than by the knife, draw it down to the external wound, open it freely, give exit to the meconium, and secure, by points of interrupted suture, the edges of the opening in the intestine to the lips of the cutaneous wound." For two months the child went on well, the opening being maintained by the introduction of an ivory stopper, not much thicker than a full-sized quill. The introduction of the stopper, however, became more and more difficult every day, and, at length, it was found impossible to introduce it. The child was then brought to Sir P. Crampton, in the following state:—She passed, with considerable pain, a small quantity of semi-fluid feces, and appeared in great agony, under which she must very soon have sunk. He enlarged the opening to such an extent as to receive a bougie of sufficient size, the introduction of which it is still necessary to repeat for a few hours almost every day. Sir Philip considered that this case resolved the doubtful question, as it appears that the rectum has full power of retaining the feces, and proved that M. Blandin's apprehension that incontinence of feces must be the result of the perineal operation, in consequence of the non-existence of a sphincter, is without foundation. Dr. R. Coulter then read the history of a case in which Sir P. Crampton had operated on a male infant, for imperforate anus, about four years previously. A septum (evidently of a fibro-cartilaginous structure) had existed about an inch and a half above the anus. On the third day after birth Sir P. Crampton passed up Weiss's exploratory needle through the septum, withdrew it, and found that its groove was filled with meconium. This having decided the nature of the contents he at once introduced a large-sized trocar through the septum, and immediately the meconium gushed out with considerable force. A small flexible hollow bougie was kept constantly introduced, its size being increased weekly until the largest could be introduced. This had the effect of keeping open the aperture, and preventing any contraction, and after the expiration of four months it was not found requisite to use the instruments further. After the lapse of six months Dr. Coulter had no occasion to attend upon the child. At present the child was well-grown, and appeared in excellent health. At the distance of about an inch and a quarter above the anus a contraction existed in the rectum, like the remnant of a membranous diaphragm with an annular perforation in its centre, through which the end of the little finger could be passed by exerting a moderate degree of pressure. The mother stated that the passage of the feces appeared to be unattended with pain or difficulty. Dr. O'Beime conceived that M. Amussat's case produced abundant evidence of the fact which he himself had endeavoured to establish, viz., that the existence of a sphincter was not absolutely necessary to the retention of the feces. His work would, he believed, be found to furnish an explanation of that point, which was to be attributed to the contracted state of the upper portion of the rectum. From inquiries he had made of several obstetric authorities, it appeared to be the conjoint opinion of those gentlemen that when, in parturition, the child has torn through the whole recto-vaginal septum, the mother is known to possess the full power of retaining the feces. Dr. O. B., in illustrating the safety with which the most obstinate constriction of the bowel, in what is called "spasmodic stricture" of the rectum, may be overcome, described the manner in which the lower bowel is affected in cases of tetanus. Of all the diseases in which constipation is most obstinate tetanus is certainly the one. In some cases of this disease, which had terminated fatally, he succeeded in passing the instrument to a considerable height, but only by means of long-continued, gradually increasing, and determined pressure against the point of resistance: when he first used this force he remembered the instrument passed rapidly upwards, as if through a narrow ring, giving to his hand a sensation as if he had perforated the walls of the intestine; accordingly, he withdrew the tube, and was much pleased to see its extremity coated with feces, and bearing no marks of blood. This circumstance had occurred to him in many instances. In those cases it was found, after death, that the whole of the colon was so enormously distended as to conceal the other intestines,

and to equal in size the thigh of a very large man, while the uppermost part of the rectum was contracted to the diameter of a barrel of a quill; but felt much firmer, and this without appearances of any organic change in the structures of the part, or any sign of thickening other than that caused by the powerful contraction of its fibres upon themselves.

During the discussion, allusion was made to the fact that, in the formation of an artificial anus in the lumbar colon, the great difficulty arises from the want of means of distinguishing the colon from the small intestine. Sir P. Crampton, however, mentioned that M. Amussat has discovered a sign, which, if not actually diagnostic, (for perhaps it could not always be appreciated,) yet bid fair to do much towards removing the difficulty in question, and had actually removed it in M. A.'s last operation: this sign rested on the fact that the small intestines sustained a motion of alternate ascent and descent corresponding to expiration and inspiration, in which the lumbar colons did not participate; if, therefore, the exposed intestine presented this oscillation, it was small intestine; if it did not, it might be presumed to be the colon.—*Dublin Med. Press*, March 5, 1845.

57. *On the possibility of diminishing the Volume of Hernia, and aiding their reduction by Internal Treatment.* By Prof. DIEFFENBACH.—“It is possible even in many cases in which the taxis has failed, to procure a most advantageous result by internal treatment. This treatment consists essentially in causing the patient to maintain the recumbent posture for a long period, instituting at the same time a certain dietetico-pharmaceutic regime. The number of cases in which the author has been successful is surprising. Those who, in consequence of the immense size of their hernia, were unable to wear a truss, have by this means had the volume of the tumour so much reduced as to render the application of that instrument both safe and efficacious. M. Dieffenbach commences the treatment by confining the patient *bonâ fide* to bed; he will not allow anything short of this, for if the patient be permitted to recline on a sofa in his day costume, or to sit up in bed even, the beneficial effects of the plan are entirely done away with. The patient then takes, morning and night, Pullna water in doses sufficient to ensure watery stools. It is, however, of importance not to persevere too long in drastic purgatives, but to vary them by the occasional substitution of the compound rhubarb pill. Eventually he gives nothing more powerful than castor oil.

“During the whole of this treatment, food either of a very nutritious or indigestible character must be carefully interdicted. Indeed, the aliment should always be given in the form of broth. The tumour should at the same time be submitted to local treatment, varying it according to the nature of its contents. If the hernia contains only intestine, and there is no adhesion, cold compresses are indicated; if, on the contrary, omentum forms part of the tumour, warm fomentations will be more suitable.

“By these means, M. Dieffenbach states that he has frequently seen the most voluminous hernial tumours diminished by half in the space of eight days.”—*Ranking's Abstract*, vol. i. from *Gaz. des Hôpitaux*, No. 10.

58. *Fracture of the Neck of the Femur with Penetration of the Trochanter.*—M. ROBERT, Surgeon to the Hôpital Beaujon, is of opinion that for the production of a fracture, with penetration of one fragment of bone into the other, it is requisite that the bone should present a conical form, so that the fracture occurring near the base of the cone, the smaller portion may pierce, and be imbedded in the larger one; that it should decrease in density from the summit to the base of the cone; and lastly, that the cause which occasions the fracture should tend to bring the extremities of the bone forcibly together.

M. Robert shows that the neck of the femur presents the anatomical characters just enumerated,—since being narrower in the middle than at its extremities, it may be compared to two truncated cones, the one short and round, corresponding to the head, the other larger, and merging into the trochanters; again, the neck of the femur consists externally of a layer of compact tissue, giving origin from its inner surface to a multitude of laminae, which converge towards the head of the femur, and by crossing form an areolar tissue with very close meshes; inferiorly, on the other hand, the cancellated structure of the neck of the bone is less